CLAIMS

What is claimed is:

1. Air separator system for separating shredded trash into relatively light material and relatively heavy material, comprising:

a first conveyor system having a conveyor belt wrapping around a roller at an end of the conveyor belt, and conveying the pieces shredded trash, in a direction, to the end of the first conveyor system;

an air manifold positioned underneath and approxiomately at the end of the conveyor belt for providing an air stream which is generally in the direction of travel of the conveyor belt; and

a splitter plate system disposed at a position forward of the end of the conveyor, comprising an elongate element which is essentially parallel to the roller at the end of the conveyor.

2. Air separator system, according to claim 1, wherein:

the elongate element is a cylinder.

3. Air separator system, according to claim 2, wherein:

the roller rotates in a direction; and

the cylinder rotates.

4. Air separator system, according to claim 1, further comprising:

a splitter sheet hanging below the cylinder, defining an accumulation area on one side of the splitter sheet which is proximal the first conveyor system; and

an accumulation area on another side of the splitter sheet which is distal the first conveyor system.

5. Air separator system, according to claim 4, wherein:

the accumulation area has a second conveyor system for removing the lighter materials that accumulate on the side of the splitter sheet which is distal the first conveyor system.

6. Air separator system, according to claim 1, wherein:

the conveyor belt is disposed at an angle "a" with respect to horizontal; and

the angle is approximately 30-60 degrees.

7. A splitter plate system comprising:

a structural frame having opposite side elements and a bottom elongate element extending between the side elongate elements; and

a splitter sheet hanging from the two side elongate elements.

8. A splitter plate system, according to claim 7, wherein:

the bottom elongate element comprises a cylinder.

9. A splitter plate system, according to claim 7, including:

means for raising and lowering the structural frame.

10. A splitter plate system, according to claim 7, including:

means for moving the structural frame towards and away from a conveyor system.

11. A splitter plate system, according to claim 7, wherein:

the structural frame is a generally rectangular structural frame having a top elongate element and two opposite side elongate elements extending downwards from opposite ends of the top elongate element, and a bottom elongate element extending between bottom portions of the side elongate elements, thereby forming a generally rectangular window; and

the splitter sheet hangs from bottom ends of the two side elongate elements.

12. Method of separating shredded trash into relatively light material and relatively heavy material, comprising:

conveying the pieces of shredded trash, in a direction, to an end of a conveyor;

at the end of the conveyor, providing an airstream in the direction;

disposing a bar and a splitter sheet forward of the end of the conveyor; and

collecting heavier pieces of material in a first accumulation area on one side of the splitter sheet which is proximal the end of the conveyor and collecting lighter pieces of material in a second accumulation area on an opposite side of the splitter sheet which is distal the end of the conveyor.

13. Method, according to claim 12, wherein the bar is a cylinder, and further comprising:

rotating the cylinder.

14. Method, according to claim 12, further comprising:

controlling an amount of pieces which are collected in the second accumulation area by adjusting at least one of the following parameters:

a speed of the conveyor,

an angle of the conveyor with resepect to horizontal,

an angle of the airstream with respect to the angle of the conveyor,

a pressure of the airstream,

a position of the airstream relative to the end of the conveyor,

a distance between the bar and the conveyor, and

a height of the bar with respect to a height of the conveyor.